

Notice of Allowability

Application No.

10/669,499

Examiner

Tung S. Lau

Applicant(s)

PAULSE ET AL.

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/19/2005.
2. ☒ The allowed claim(s) is/are 39, 40, 41, 42, 47, 63, 50, 51, 52, 58, 59 and 64.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/19/2005 has been entered.

Prior Art Cited

2. Karger et al. (U.S. Patent Application Publication 20010033809) discloses a universal interface for continuous on-line liquid sample introduction directly to the time-of-flight mass spectrometer, which can further promote throughput and utility of MALDI-TOF MS, is disclosed. Preferably, the liquid sample includes a matrix, either solid or liquid, for use in matrix-assisted-laser-desorption-ionization, most particularly in a time-of-flight mass spectrometer which can further promote throughput and utility of MALDI-TOF MS. In the method of the invention, the same samples and matrices, both solid and liquid, can be used as in conventional MALDI. In practice of the method of the invention, a solution of sample containing, e.g., peptide and matrix is infused directly into the source chamber of a mass spectrometer at sub-atmospheric pressure, deposited on a moving sample holder, such as a rotating quartz wheel, and desorbed by, e.g., a nitrogen laser. The method of the invention is particularly amenable to

multiplexing, the parallel deposition of multiple samples, e.g., from a capillary array or microchip channels, with subsequent sequential desorption with a scanning laser. This format is particularly useful for high throughput MS analysis. Also disclosed is an off-line deposition chamber and a general method of preparing a sample for analysis that results in the homogeneous deposition of small quantities of sample at improved reproducibility. This format of sample preparation is particularly useful with existing commercial mass spectrometers.

Allowable Subject Matter

3. Claims 39, 40, 41, 42, 47, 63, 50, 51, 52, 58, 59 and 64 are allowed.

Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance:

Independent claims 39 and 50 contain allowable subject matter. None of the prior art of record shows or fairly suggests the claimed invention.

Regarding claim 39:

The primary reason for the allowance of claim 39 is the inclusion of the method steps of method for analyzing mass spectra including determining number of signals represents a minimum number of signals for selected cluster and excluding one or more clusters from the plurality of signal clusters from the plurality of signals clusters if the number of signals in a signal cluster is below the

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predetermined number of signals. It is these features found in the claim, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

Claims 40, 41, 42, 47 and 63 are allowed due to their dependency on claim 39.

Regarding claim 50:

The primary reason for the allowance of claim 50 is the inclusion a computer medium including determining number of signals represents a minimum number of signals for selected cluster and excluding one or more clusters from the plurality of signal clusters from the plurality of signals clusters if the number of signals in a signal cluster is below the predetermined number of signals. It is these features found in the claim, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.


Claims 51, 52, 58, 59 and 64 are allowed due to their dependency on claim 50.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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